LAB 4

Objective: Using `minikube`, create a single node k8s cluster on your laptop. Use the `kubectl` CLI to validate that your installation works, and run the Ghost microblogging framework. This is illustrated in the screencast.

The remaining exercises in this course can all be done on `minikube`. In this exercise, we will install **minikube** and test that it is functioning properly. Below is the step-by-step walkthrough:

- Download `minikube` from the GitHub release page. Follow the instructions to do the installation.

- Download `kubectl` from the official release.

- Start the `minikube` VM and explore the various `minikube` commands:
  ```
  $ minikube start
  $ minikube --help
  ```

- Check the IP address of `minikube` ☐
  ```
  $ minikube ip
  ```

- Check that you can reach the `minikube` instance with `kubectl` ☐
  ```
  $ kubectl get nodes
  ```
  This should return `minikube`

- Run your first Pod
  ```
  $ kubectl run ghost --image=ghost
  ```

- Expose your application via a service ☐

  `$ kubectl expose deployment/ghost --port=2368 --type=NodePort`

- Find the **`NodePort`** value of your service ☐

  `$ kubectl get svc ghost -o yaml`

- Open your browser and check that Ghost is running.

Congratulations, at this stage you should have **`minikube`** running on your local machine and you will have deployed and accessed your first Kubernetes application. Do not worry if some of the concepts haven't been explained yet, we will dive deeper in the next chapters.